Public Works Management System

by

Sharon Joy Midda,

Kundeshwar Prashant Ketan

Warif ALkaltham

Bhandari Shivani

This is a Capstone project submitted to the Marshall University graduate faculty in

partial fulfillment for the degree Master of Science.

Major Subject: Computer Science

Approved:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Instructor of Capstone course

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Director of Major Department

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chairman of Graduate Programs

(This is what I found from the two BB samples, we could remove some parts from the table content or add as the project needs)

-----------------------------------------

Acknowledgements

We would like to thank our families who support as to achieve this goal.

We are thankful for Dr. Yoo for his guidance and assistance.

We appreciate Dr. Schroeder efforts for helping to communicate with the client.

Finally, I have the pleasure to be a member of this group project.

**Introduction**

The Public Works Management System is a web application which allows the citizens of Huntington to view the works being done by the Department of Public Works. These repairs being done by the department are depicted on a map with a color scheme of red for incomplete works and green for completed works.

* 1. Scope:

The project includes but is not limited to the following:

1. Admin Page:
2. Management of a dashboard for maintaining the citizen’s requests.
3. Adding a request for repair.
4. Editing the request in case of multiple requests for the same address.
5. Adding the completed requests to a completed reports page.
6. Viewing the reports on Map.
7. Provision for the Department of Public Works to get an analysis of the work done by pulling up a report. Each report can be exported as an excel file or be printed for further use.
8. The admin can email the requests to her supervisor so that he could divide the work among the workers in the department.

Use Cases Details

Add Figure 1: Administrator Use Case Diagram

Administrator

Login

Administrator must log in to use the system.

System will access the home page after logging in.

Access a dashboard

Administrator must select a division name to view its dashboard.

System will access a dashboard depending on the chosen division.

System will show logged in as, depending on the administrator name.

Add Request

Administrator must select create form button to add a new request.

Administrator will fill the request information.

Administrator must press the submit button to save the request.

System will add the requests’ Id, date and address to the dashboard list.

Edit Request

Administrator must click the edit button to edit a request.

System will access the form page.

Administrator must click the submit button to save changes.

Assign the done requests

Administrator must click the done button to assign a request as completed.

Print Report

Administrator must click the print button to print the completed requests list.

System must open the print form.

Email Report

Administrator must click the email button to print the completed requests list.

System must open the email form.

Search

Administrator must click at the search bar.

System must show the search result.

View Map

Administrator must click at the view map button.

Sytems must access the map and showing the pins for all requests.

Logout

Administrator must click at logout button.

System will logout the user access.

Add Figure 2: User Use Case Diagram

User (Citizens)

View Map

User will access the website.

Sytems must access the map and showing the pins for all requests.

Hyperlinks after normal administrator login

Home

Dashboards

Create Forms

Report

Log Out

Scope (need to be a paragraph)

The project includes but limited to

i. Web access for citizen of department.

ii. Web access to Google maps.

iii. Print updated Google maps according to the color.

The Office of Public Works at the City of Huntington has been busy at the city doing repairs throughout the city, but they are not getting the publicity for it that they should, and they also would like to streamline the way that citizens can report things, which need to be addressed.

Background

Our client the department of Public Works consists of seven divisions: Streets, Sanitation and

Trash, Traffic Engineering, Motor Pool, Inspections and Permits, Building Maintenance and Administration. The division of Public Department was responsible to maintain hygiene and cleanliness around the city.

One of the major challenges the department of Public Works faced was receiving many phones calls from citizens requesting repairs, or informing about the things, which were undone. For example, taking out the trash or repairing potholes during a rain. The problem the department faced was that calls would be coming in asking for repairs that already had been attended but it would need more time. Therefore, by implementing this module, citizens will be able to access the map of the city of Huntington, minimize the target place then see if the work is ongoing or if it is finished.

Summary

The client is very interested in developing a web-based interface, which has two functions:

1) Members of the community can pull up a map of the city with pins showing the work that has been done in the city and request work be done

2) The city can better identify where problem spots are being addressed regularly which can be designated for more significant repairs (like repaving a whole road rather than filling potholes).

On the citizen side of the platform, when a user moves over the pin on the map (or clicks on it, whatever is most appropriate), a label would appear showing what activity has been completed there (pothole fixing, sidewalk easement install, repaving, etc.). It will show the date when the repair occurred, as well as have an area for other comments to be entered by the city. That said, the city needs to have permissions to create these objects as they come in, and they need the data from an excel spreadsheet to be converted so past work will be present on the map as well.

Functional Requirements

Administrator must have a unique username and password to access the website.

Administrator must use PHP MySQL to access the database.

Nonfunctional Requirements

Time

Easy to use.

Hosting.